

Improving laboratory quality management & biosafety for National Influenza Centres

University of Siena
Siena, Italy

23 – 27 July 2018

Background

The Training Workshop arose through a combination of training offers received under the WHO Pandemic Influenza Preparedness (PIP) Framework Standard Material Transfer Agreement 2 (SMTA2) process, and the collaborative efforts and support of the University of Siena, the Association of Public Health Laboratories (APHL) and the WHO.

This training piloted a new approach to SMTA2 benefit sharing and promoted the achievement of the PIP Framework goal of improving pandemic preparedness and response.

Under the PIP Framework, entities that receive PIP Biological Materials (PIP BM) from GISRS are required to conclude an SMTA2 with WHO. PIP BM Recipients identified as 'research and academic institutions' must consider providing a benefit in exchange for using the PIP BM. Of the 65 academic institutions that have signed an SMTA2 to date, more than 29 of them offered to provide a benefit, with the majority offering to provide training.

The University of Siena offered to host the workshop as part of its SMTA2 benefit sharing contribution. WHO contacted all other SMTA2 research and academic institution signatories to seek financial support for the travel and other costs for trainees to attend the workshop.

Training objectives

Directed at National Influenza Centres (NICs), the overall purpose of the training was to **increase participants' understanding of and capacity to implement Laboratory Quality Management Systems (LQMS) including best practices in laboratory biosafety** in their respective laboratories. Implementation of rigorous quality management in NICs will ultimately help to improve their ability to produce internationally accepted test results and conduct safe laboratory practices.



Target laboratories and participants

The WHO Global Influenza Programme (GIP) conducted a review of all NICs to assess compliance with their WHO Terms of Reference, for the purpose of strengthening the Global Influenza Surveillance and Response System (GISRS). As part of this review, key gap areas were identified and a training agenda was designed to address these gaps.

13 quality / biosafety officers and senior lab technologists from the following 12 countries attended the 5-day workshop:

Argentina	Lebanon	Myanmar
Czechia	Liberia	Sudan
Indonesia	Malaysia	Trinidad and Tobago
Kuwait	Mauritius	Viet nam



Workshop sessions

The training guided the participants on topics that are essential for quality management of a public health or clinical laboratory, which are based on standards in both the ISO 15189 and CLSI GP26-A3 documents. By the end of the training participants should have gained the ability to understand and explain the model of Laboratory Quality Management Systems and the 12 "Quality System Essentials" as a systematic approach to quality management, its importance and benefits.

Workshop sessions covered topics such as:

Laboratory quality management

- Sample management and transport
- Quality control for influenza labs
- External quality assessment programs
- Document control and information management
- Facilities Design
- Spill clean-up procedures

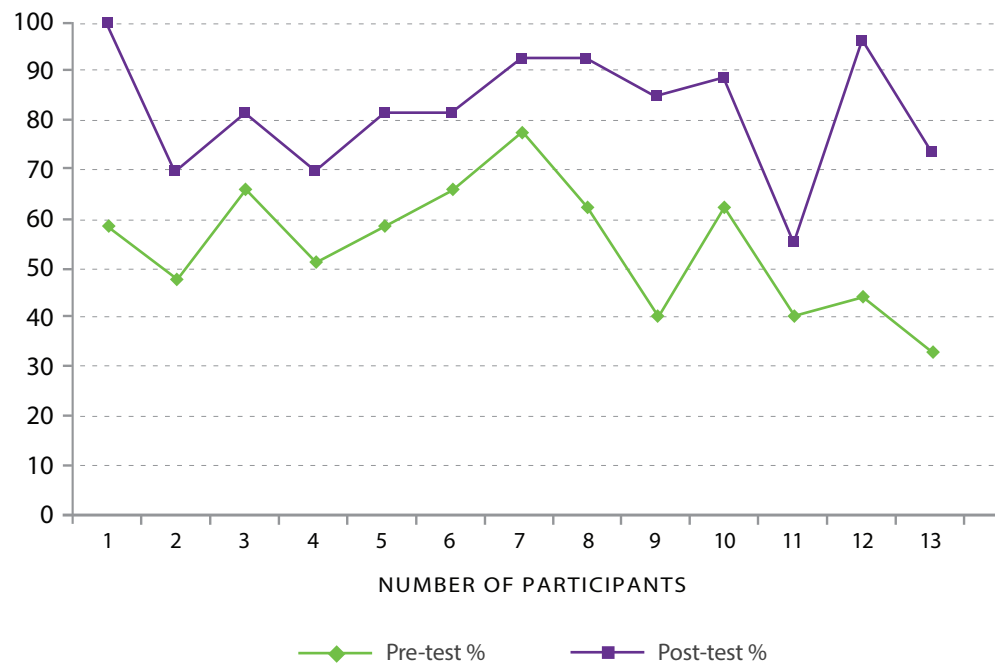
Biosafety

- Risk assessment theory
- Risk assessment exercises
- Biorisk mitigation

[See full agenda](#)



Pre and post course test results



Pre-workshop and post-workshop tests were used to measure the effectiveness of the training. Overall test results showed significant improvement in participants' knowledge and understanding of quality management and biosafety in laboratories. As shown in the graph above, each participant (1 - 13) increased his/her knowledge after the training.

A SUCCESSFUL COLLABORATION



Acknowledgement & Thanks

The training workshop could not have happened without the support of various institutions. WHO staff in headquarters, regions and country offices worked together to develop the agenda and training materials; select the participating NICs based on identified criteria and trainers; and conduct the training activities.

As host, The University of Siena was responsible for all of the logistical details, including providing the training venues and arranging travel, accommodation and hospitality for the participants. The University also provided other in-kind and financial contributions.

The Association of Public Health Laboratories (APHL) generously covered the cost of 3 trainees, provided 2 trainers and supplied materials for the training activities. The following SMTA2 signatories sponsored the costs of 1 participant each: Accuratus Lab Services (USA); Biomedical Primate Research Centre (Netherlands); Cincinnati Children's Hospital Medical Centre (USA); the University of Georgia; the University of Siena and VisMederi srl (Italy). The biotechnology company VisMederi also provided its laboratory space for some of the training activities. A representative of the NIC Italy, as the host NIC, participated in the 5 day training workshop and helped conduct the training activities.